



The Doctoral Curriculum: Needs and directions in research training

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Report for the Research Programmes and Policy Unit
Higher Education Group
Department of Education, Science and Training
2004

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Chapter 1

Challenges to the Doctoral Curriculum

The past decade has seen unprecedented scrutiny of the purposes and practices of doctoral education as a form of research training. Regarded as the pinnacle of university scholarship, the doctorate has faced a growing range of challenges to its traditional forms and status. Of particular importance are concerns about the quality and breadth of research training in Australian universities expressed in a number of government reports and inquiries (Review Committee on Higher Education Financing and Policy (West Report), 1998; Kemp, 1999; Gallagher, 2000). However, these same issues have been raised across national boundaries and fields of study, indicating that, rather than being a problem in any particular system of higher education or research training, the concerns signal deep-seated and wide-ranging challenges to the traditions of the doctoral curriculum.

Kendall (2002) reviews a range of claims that the PhD in the United States is outmoded, identifying a crisis rhetoric and a diverse set of recommendations for their solution. There is particular concern in the US that the emphasis on institutional needs in doctoral training is given precedence over the needs of students after they graduate (Adams and Mathieu, 1999; Association of American Universities, 1998; Geiger, 1997; Raber, 1995). In the United Kingdom, similar issues have been raised (Economic and Social Research Council, 2001; Office of Science and Technology, 1993). In reviewing recent developments in research training in England, Coate and Leonard (2002, p. 24) note a view among the Research Councils that 'the PhD provides neither a rigorous enough methodology training for those who go into academia, nor an appropriate initial and continuing professional development for those who go outside', though the authors comment that there is little systematic research on which to base these assertions.

In response to these concerns, doctoral education has been the subject of an active program of research and reform. There is a large and growing literature on doctoral education, including studies of the supervision process, the experience of doctoral students as they are socialized into research cultures, the innovations of professional doctorates, and a range of reviews of changing enrolment and graduation patterns. In particular, the evaluation of the outcomes of doctoral programs has focused on the quantitative analysis of outputs of research (publications, etc.) and programs (graduation rates, time to completion, etc.); and on surveys of graduate satisfaction with pedagogical processes and resources – the 'how' of supervision or the level of support services.

An interesting case in point is Neumann's recent study of *The Doctoral Experience: Diversity and complexity* (Neumann, 2003), which aims 'to gain a better understanding of the research education experience of Australian doctoral students'. The chapters of the study's comprehensive and valuable report address institutional, disciplinary and individual contexts, recruitment and selection of students, supervision, support structures, quality assurance, and changing models of the doctorate. Neumann's study typifies the research focus of studies of doctoral research training.

The result of these emphases has been a relative neglect of what might be called the doctoral curriculum – what it is that graduates learn in their courses of study, as distinct from the pedagogy of how they learn or issues of program delivery. The 'what' of research training is largely taken for granted as being embedded in the practice of the research itself. As a result, it remains implicit, largely hidden from scrutiny, and potentially immune to change.

Consequently, the present study attempts to identify and articulate the doctoral curriculum in

four fields of study in a range of Australian universities. It does so in order to allow the various participants and stakeholders in research training to review the nature of the doctoral curriculum, and to evaluate it in light of contemporary challenges to the doctoral degree. The concept of the doctoral curriculum needs some development and explanation. However, before addressing this matter, it is important to detail the changing context which has produced the challenges to doctoral education, and which warrant this focus on the doctoral curriculum. These challenges seem more public and pressing than ever before, reflected in concerted debates on key aspects of the doctorate.

Debates over the doctoral curriculum

If the purpose of doctoral study was to produce, through a process of socialisation and induction, academics who would continue the traditions of research in which they were trained, then such a model seems to have been quite successful. The university tradition of induction into the research process has played a crucial part in the development of science and culture in the last half century. Australian universities account for the majority of the nation's research effort, and for an overwhelming proportion of the training of Australian researchers. The standards of Australian research and scholarship are generally regarded as world class. While there are debates about the actual extent of university influence on the development of modern technology, and while it is true that the PhD as we know it is of relatively recent origin (especially in Australia), the achievements of doctoral research in Australia are impressive. However, despite these past successes, the doctoral tradition is entering a new phase of diversity and change which puts this tradition in question.

Diverse destinations

The doctorate has traditionally been a preparation for academic work, with a smaller role in training researchers for positions in industry research and development. A key aspect of the current questioning of the traditional PhD curriculum is that this is no longer the dominant pattern of destinations for doctoral graduates. The West Report into Australian higher education funding (Review of Higher Education Financing and Policy, 1998, p. 157) reports that fewer than half the research graduates in 1994 and 1995 who were employed full time in the following year were in jobs directly related to their research training. Similar results have been found in the United States and the United Kingdom, with widespread evidence that a decreasing proportion of doctoral graduates is entering the academic profession (Adams and Mathieu, 1999; Golde and Dore, 2001; Raber, 1995, p. 45; The Wellcome Trust, 2000, p. 12).

The Wellcome Trust reported UK graduates' views that academic work was, for many, not attractive, as it lacked job security and a defined career path, and offered low salaries. In the US the gap between the number of PhD graduates and available academic positions is widening (Golde and Dore, 2001). This trend is also observable in Australia, where the Australian Research Council review of the humanities noted that one consequence of this development is 'the need to attend to the general benefits of research training much more deliberately' (Australian Academy of the Humanities, 1998a, p. 53). The equivalent report in the social sciences observed that 'Most aspiring scholars enter three or four years of graduate training with only vague notions of what might happen to them at the end' (Academy of the Social Sciences, 1998, p. 19).